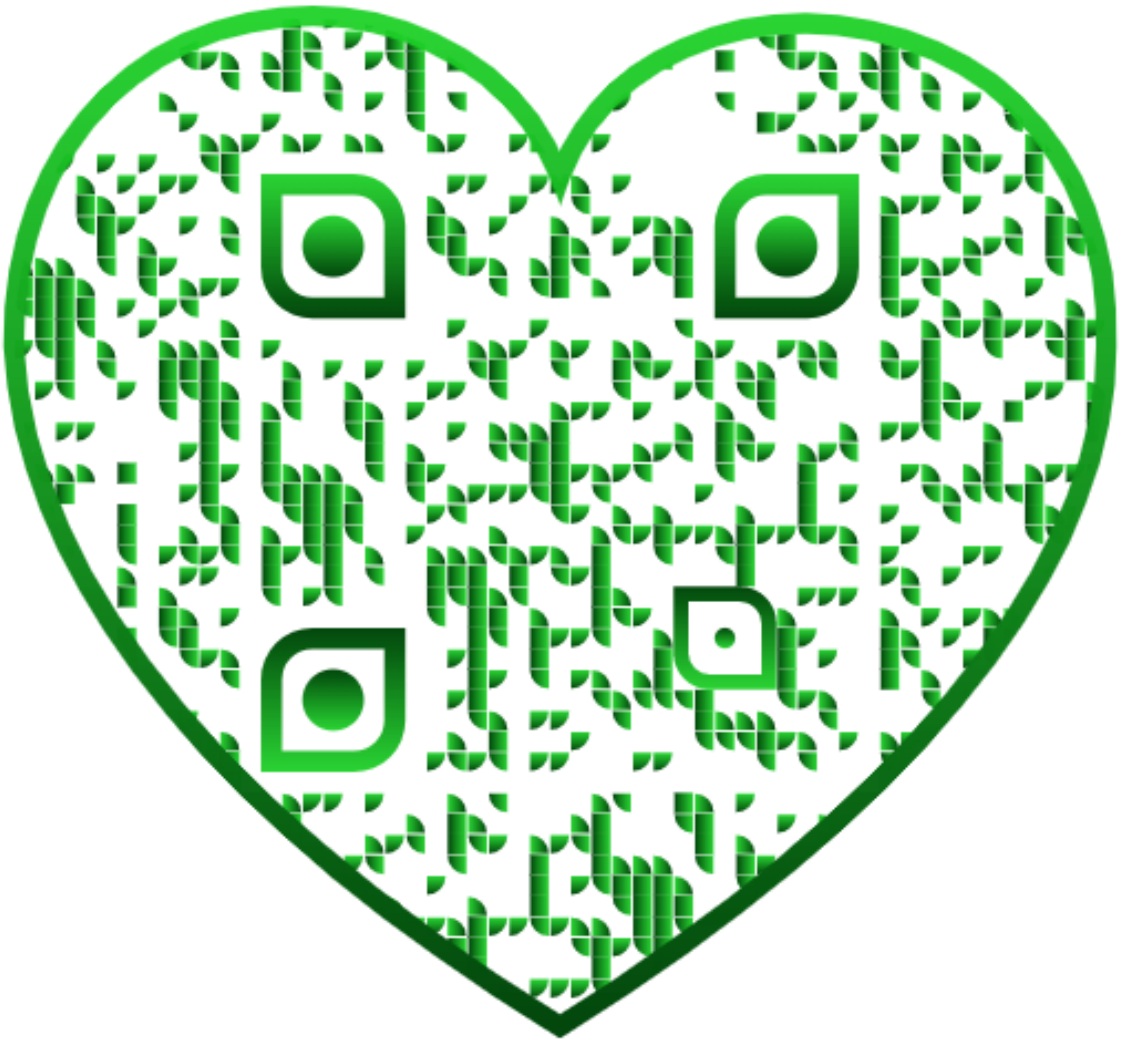
صيدلانيات

عملي

د/ نسيم عامر

اعداد الطالبة/ هديل الاصنعاني



Pharmaceutices Lab 1

Pharmaceutices:-
is the sicence that "wtarch" Dealing with Dosage form Prepration

Dosag form "State of Mater"

Liquid	Semi Solid	Solid
. Solution	. gell	. Taplet
. Suspension	. cream	. capsules
. Emultion	. Paste	. Powder
. Lotion	. onintement	. granules
. elexier	. supp	
. spirits		

equipment of Labi-

1_ Beaker 25 _ 600ml
2_ Measuring Slynder 25 _ 1000ml
3_ glass rod
4_ Funnel
5_ seiving
6_ heater
7_ test tube
8_ PiPPete
9_ Marter, Pestle مصنوع من بورسلان
11_ Peltar Paper
12_ Water bath تسخين بدرجات معينة درجة غليان الماء = 100°c
13_ Dissolution tester
basct badul ⇒ % of Drug relase
14_ Ovan Drying

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- Romman Number

I → 1 II → 2 III → 3 IV → 4 V → 5 VI → 6

VII → 7 VIII → 8 IX → 9 X → 10 XX → 20

XI

$\bar{ss}$ → $\frac{1}{2}$ grain = $\frac{1}{15}$

3 Drach → 4 ℨ → 4 ℨV ⇒ 4×5

3 ounce → 30 ℥ → 30

fluid ℥ = 30 ml

L → 50 C → 100 ↀ → 500 M = 1000

- MCMLix = 1959 MCMLIX
- MDCCC xiv = 1814 MDCCC XIV / MCCM. XIV
- 18 = XVIII
- 1970 = MCMLXX / MCMXXXC
- 3V = 4×5 = 20

Latin Abbaeravtions :-

Rx = You take

T.i.d = Three time in day

q.i.d = foxar time in day

q.d = every day

$\bar{s}.o.\bar{s}$ = in necessary

P.C = After meal

A.C = Befor meal

fit.mit = prepare then send

A.d = up to

Pharmaceutices Lab

Prescription

Active ingredient
nature substance
that has therapwical
effect.

inactive ingredent
inert substance
"Additives"
- coloring agent
- flowring agent
- sweating agent

Solvent → Dissolving & vehicle complete to requiral volume

enalargment / Reduction

℞
A → 500
B → 300
C → a.d 1000

Lit.mit 50 Reduction

Sigi 5ml T.i.d .P.C

500 → 1000
x → 50

$\frac{500 \times 50}{1000} = 25$

300 → 1000
x → 50

$\frac{300 \times 50}{1000} = 15$

Required All ammount $\frac{50}{1000} = 0,05$ الكمية المطلوبة

Liquid Dosage form

classification of Liquid Dosage form

Monophase Liquid Dosage form

- interal Use
  - syrup
  - Mixture
  - Linctuses
  - Elixirs
  - Parent
  - aral
- External Use
  - Month
    - argle
    - Mouth wash
  - skin
    - Lotion
    - other
  - Nasal Drops
  - ear Drops

Biphase Liquid Dasage form

- internal use
  - suspension
- External use
  - emulsion

Solution

Difen:-

Are homoegenous Liquid PrePration, containing one or more dissolve ingredients and are used as avariety of Dosage for for internal or external Use.

*** Advantage:-**

1- Repid absurbation from GIT

2- easy to swallow for children and eldrey

3- uniform Distribution.

sdute → small amount
solvent → Large amount

*** Disadvantage :-**

1- Less stable other then solid dosage form.

2- may be loss by breaking.

3- Accurcy Depending on Patient.

Rx : .Simple syrup. U.S.P 85g 145ml

Sucrous 85g Dastal water "D.W" a.d 100ml fit.mit 25ml

85g → 100
x → 25ml $\frac{85 \times 25}{100} = 21.25\,g$

طريقة أخرى :
$\frac{25}{100} = 0,25$
↗
الخريد في الصيدلية

45 → 100
x → 25 $\frac{45 \times 25}{100} = 11.25$

Follow "Solution"

Uses:-

1- Sweating agent 2- Vehicle.

Procedure:-

1- weight 21.25g sucrose in balance.

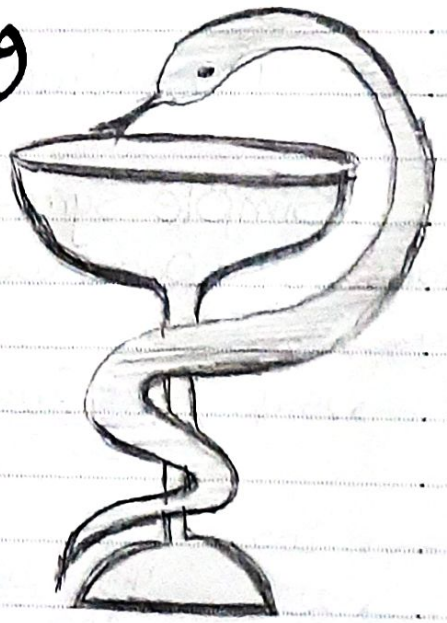
2- Heat 11.25ml of D.W near boling.

3- Add sucrose to D.W with contaus.

4- Pour the solution to the M.C and adjust to required volume with D.W

5- Pour the syrup to clean dry buttle and Label

"ويسرلي أمري"



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صنع الكهارة

Pharmaceutics Lab 3

Ammonium chlorid Cough Syrup

Rx :

- Ammonium chlorid 3gm Active ingredient
- Liquid extract of Liqurice xxml · Active ingredient · Flavoring agent · Demulcent
- Simple syrup a.d cml · vehicle · sweating agent · Solvent

Fit. mixture 20
Sig iii Tsp T.i.d P.c

USES :-

As Anti_ tussive
for treatment productive of cough as :-
- Expectorant طارد للبلغم
- Demulcent ملطف
- Flavored منكه

Calculation :-

$3g \longrightarrow 100$
$x \longrightarrow 20$
$\frac{3 \times 20}{100} = .6gm$

$20 \longrightarrow 100$
$x \longrightarrow 20$
$\frac{20 \times 20}{100} = 4$

Procedure :-

1. Prepare simple syrup according to U.S.P
2. Ammonium chloride then dissolved it in liquid extract of liquorice that diluted with an equal amount of simple syrup
3. Transfar product to mixture and complet with simple syrup
4. Transfar to bottle and stick Lable.

Pharmaceutics Lab 4

Potassium Permangenate solution .2٪

Rx:- . Potassium permengenate 2 gm

. D.W' a.d. 1000 ml.

Fit. mit 50 ml sig 3g to be applied Divectelly to affected aveα Q.i.d

Procedure:-

1- Dissolve the amount of Potassium permengenate in 5ml of D.w till Complete Dissaluing.

2- Transfar the potassium permengenate solution to M.C then Complete to required volume 50 ml.

3- Transfar the product to Imber bottle then stick the Lable.

Calculation:-

$$2gm \longrightarrow 1000$$
$$x \longrightarrow 50$$
$$\frac{2 \times 50}{1000} = 0,1\,g$$

Follow ☺

.Uses :-

1_ Use ls anti-septic For wound.

2_ Use For cleaning and washing of Fruit and vegetable.

3_ In Some Concentration as:

1%. Anti-fungi.

4%. Anti_bacteria.

1/4000 mouth wash if it's dulit.

Pharmaceutics Lab 5

• Oral Rehydration solution (O.R.S)

Rx:-

- Sodium chloride 0.43g
- Potassium chlorid 0.50g
- Sodium bicarbonate 0.10g
- Glucose 1g
- D.w a.d 5ml

Fit. mitt 50 ml sig: 5ml q → every 10 minutes

• The role:

- Nacl, Kcl, $NaHCO_3$, Glucose → active ingredients
- Distal water → the solvent (vehicle)

• Uses:-

1. Loss of, Na^+, K^+ → rehydration
2. Anti-diarrhea

• Calculation:-

- Nacl 0.043g → 5ml
  x → 50 ml
  $\frac{50 \times 0.043}{5} = 0.1g$
- Glucose 1g → 5ml
  x → 50ml
  $\frac{1 \times 50}{5} = 10g$

Follow

- KCl 0.050 g → 5ml ... $\frac{0.050 \times 50}{5} = 0.5g$
  x → 50ml

- NaHCO3 0.020g → 5ml $\frac{0.020 \times 50}{5} = 0.1g$
  x → 50ml

Procedure:-

1- Dissolve one substance after the other in half the vehicle in a beaker by mean of glass rod well dissolve.

اذوب المواد واحده تلو الاخرى بنصف كمية الحامل "داخل بيكر"

2- Pour to measuring cylinder and adjust the volume by the vehicle.

اسكب الى سلندر واكمل النسبة المطلوبه

3- Lable

sig → one tea spoon will be taken every 10 minutes.

الصق اللاصق واكتب المعلومات عليه وهي:

- اسم الدواء
- كميته
- الاستخدامات
- تاريخ التصنيع
- الجرعة

Lab 5

Iodine Tincture ⇒ non aqeous externally use

Weak Iodine solution

Rx:

- Iodine ℵV → 25g
- Potassium iodide XXV → 25g
- D.w ← Distiled water XXV → 25g
- alcohal 90% M → 1000 ml

Fit. mitt L → 50ml

Sig / applied «P.a» to the affected Part

Uses:

- Anti-septic wounds
- Before surgical operations
- Disinfectant agonist bacteria and fungi.

Role:-

- Iodine, KI → active ingredient
- Dist. water → the solvent
- alcohal 90% → The vehicle

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صنو الحجارة

Follow

Calculation :-

Iodine 25g → 1000 ml
x → 50 ml
$\frac{25 \times 50}{1000} = 1.25\,g$

KI 25g → 1000ml
x → 50 ml
$\frac{25 \times 50}{1000} = 1.25g$

D.W 25 ml ⟶ 1000 ml
x ⟶ 50 ml
$\frac{25 \times 50}{1000} = 1.25\,ml$

Procedure:-

- Dissolve KI in water then add the iodine
- Pour the product to 1.c and adjust to required by alcohol.
- Pour to the bottle then label.

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Pharmaceutics Lab 6

Suspension

One solution or Liquid Dosage Form one coarse dispersion conting insoluble solid particle suspected in Liquid medium with the use of suspending agent.

Type of suspension:-

1- Oral suspension
- mixture
- gel & magma
- Antibacterial

2- Parentral suspension.

3- External suspension.

Acacia mucilage

Rx :- . Acacia powder 350g Active ingredient
. Benzoic acid 2g preservetive
. D.W ad 1000 ml Solvent / Vehicl
. Fit. mit 15 ml

Calculation

350g → 1000ml
X → 15
$\frac{350 \times 15}{1000} = \boxed{5.25}$

2g → 1000 ml
X → 15 ml
$\frac{2 \times 15}{1000} = \boxed{0.03}$

Follow Lab 6

- Procedure:-

1. Place acacia powder in Dry morter.
2. add 40% of total volume Required of vehicle. containing Benzoic acid that previously Dissolved by the aid of heat
3. titurate quickly in one Direction till Form homogenous mixture.
4. Dilute muillage with D.W (2ml) to make it pourable.
5. Add Flow to Required volume
6. trans to bottle then Lable.

Uses:-

Base For other Oral coexternal suspension

Lab/ 7

Chalk (Calcium carboonate) Mixture

Rx:

- Chalk (CaCO3) vgr. • Active ingredent
- MgCO3 vgr
- Acacia Mucilage 15ml

• vehichle / preservative / solvent: Chlor Form ad ii F 3 30ml 2x30 = 60ml

Fit. mitt ii F 3
sig:- 10ml t.i.d P.C
P.P.a three time Daily after meal.
shake well befor Use.

Uses:-
1- Anti - Ac
2- Anti - Flatulance
3- Dyspapsia

• Calculation:-

• 30 ÷ 60 = 0.5

CaCO3 0.5 x5 = 2.5 g
MgCO3 0.5 x5 = 2.5 g
acacia mucilage 0.5 x15 = 7.5 ml

ALAVIB

/ /

Procedure ...

- Prepare Acacia Mucilage
- Finelly Powder all ingredients seperatlly then Mix it regular to Form homogenous Mixture of Powder
- Add 2ml of the vehicle nturate till Form a homogenous Mixture.
- Add a suspending agent Gradually to Form homogenous Mixture
- Transpor to M.C and complete to Required volume

هناك بعض الاختصارات مثل الآتي مع معانيها:

M.C	Measuring cylinder
D.W	Distilled water
q.s	up to للتكملة بالحامل استخدم هذا المصطلح
P.W	Purified water

Pharmaceutics Lab 8

Emulsions

- They are Preparations contain two immisible Liquid.
  Dispersed phase in dispersed medium
  • Liquid in Liquid •

- Dispersed phase = internal phase
  discontainous
  ↓ Low quantity

- Dispersed medium = External Phase
  Continuous
  high quantity ↑

Type of emulsion :-

1. O/W emulsion internal Phase "oil", external Phase "water"
2. W/O emulsion internal Phase "water", external phase "Oil"
3. Multiple emulsion
   containing ≥ Phase O/W/O or W/O/W
   Use as prodrug

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Fdlow

Purpose of using emulsion

1. improve taste as medical drug.
2. improve solubility of many drug.
3. improve stability of Drug which are unstable in a.s
4. improve appearance of some Oily substance
5. Prolong Drug action
6. Reduce irritation effect on skin.

Methods of Preparation emulsion:-

1. Dry Gum method
2. wet Gum method.

Castor Oil Emulsion

℞
- acacia Powder 3g = 4
- Castor Oil xvi = 16
- purified water ... ad ... Lxxx = 80

Fit mitt L = 50

sig/30 ml internoct → meust shake the bottole.

Calculation:-

50 ÷ 80 = 0.625 عامل التحويل

acacia powder 0.625 x4 = 2.5

Caster oil 0.625 x16 = 10

اضربه في الكميات من المواد الاخرى لمعرفه كم سنأخذ من المادة لتحضير 50 ml

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Fdlow

Procedure :-

1- weight the acacia powder "Gum" in morter and titurate it with double volume of water and Form mucilage.

2- Add the Castor Oil slowly at regular movement and titrate it rapidly until a clicking sound is prodcing. The product become white → primary emulsion.

3- Add more wate to the product Find volume 50ml with stiring completly.

4- Pour the product into dry, clean amber bottle

5- Lable

Uses :-

- Laxative in smell dose.
- purgative in Large dose.

تم بحمد الله.